

**Table 4-3**  
**Summary of ESI Groundwater Analytical Data**  
**Fansteel Metals/FMRI**  
**EPA Region 6**

Analyte	SCDM Benchmark (lowest value)	3 x Backgroud (MW-51S) or RL	CAS.NO	Units	Station Sample ID Date Type	MW-51S MW-51S-20190410 4/10/2019 Field Sample	MW-52S MW-52S-20190410 4/10/2019 Field Sample	MW-53S MW-53S-20190409 4/9/2019 Field Sample	MW-53S MW-DUP1-20190409 4/9/2019 Field Duplicate	MW-54S MW-54S-20190409 4/9/2019 Field Sample	MW-55S MW-55S-20190410 4/10/2019 Field Sample	
<b>SVOC</b>												
2,4-Dimethylphenol	400	0.2	105-67-9	ug/L	--	0.04	U	0.042	U	0.04	U	0.04
2-Methylnaphthalene	80	0.1	91-57-6	ug/L	--	0.019	U	0.02	U	0.019	U	0.019
2-Methylphenol	-	0.2	95-48-7	ug/L	--	0.045	U	<b>0.12</b>	JQ	0.045	U	0.045
3&4-Methylphenol	2000	0.2	3/4-CRESOL	ug/L	--	0.036	U	<b>0.12</b>	JQ	0.036	U	0.036
Acetophenone	-	0.2	98-86-2	ug/L	--	0.024	U	0.025	U	0.024	U	0.024
Anthracene	6000	0.1	120-12-7	ug/L	--	0.014	U	0.015	U	0.014	U	0.014
Benzaldehyde	-	0.2	100-52-7	ug/L	--	0.03	U	0.031	U	0.03	U	0.031
Bis(2-ethylhexyl)phthalate	5.5	0.2	117-81-7	ug/L	--	<b>0.06</b>	JQ	0.039	U	<b>0.055</b>	JQ	<b>0.068</b>
Di-n-butyl phthalate	2000	0.2	84-74-2	ug/L	--	0.02	U	0.021	U	0.02	U	0.02
Di-n-octyl phthalate	200	0.2	117-84-0	ug/L	--	0.02	U	0.021	U	0.02	U	<b>0.054</b>
Isophorone	-	0.2	78-59-1	ug/L	--	0.025	U	0.026	U	0.025	U	0.025
Naphthalene	400	0.1	91-20-3	ug/L	--	0.02	U	0.021	U	0.02	U	0.02
Phenol	6000	0.2	108-95-2	ug/L	--	0.035	U	<b>0.2</b>	JQ	0.035	U	0.035
<b>VOC</b>												
1,1,1-Trichloroethane	200	1	71-55-6	ug/L	--	0.2	U	0.2	U	<b>6.9</b>		0.2
1,1-Dichloroethane	13	1	75-34-3	ug/L	--	0.2	U	0.2	U	<b>2</b>		0.2
1,1-Dichloroethene	7	1	75-35-4	ug/L	--	0.2	U	0.2	U	<b>89</b>		0.2
2-Butanone	10,000	2	78-93-3	ug/L	--	0.5	U	0.5	U	0.5	U	0.5
2-Hexanone	-	2	591-78-6	ug/L	--	1	U	1	U	1	U	1
4-Methyl-2-pentanone (MIBK)	10,000	2	108-10-1	ug/L	--	0.7	U	0.7	U	0.7	U	0.7
Acetone	10,000	2	67-64-1	ug/L	--	2	U	2	U	<b>2</b>	U	2
Carbon disulfide	2,000	2	75-15-0	ug/L	--	0.6	U	0.6	U	0.6	U	0.6
Chloroform	2.5	1	67-66-3	ug/L	--	0.2	U	0.2	U	<b>1.3</b>		0.2
cis-1,2-Dichloroethene	40	1	156-59-2	ug/L	--	0.2	U	0.2	U	<b>13</b>		0.2
Tetrachloroethene	5	1	127-18-4	ug/L	--	0.3	U	0.3	U	<b>1.7</b>		0.3
Toluene	1,000	1	108-88-3	ug/L	--	0.2	U	0.2	U	<b>0.68</b>	JQ	<b>0.64</b>
Trichloroethene	5	1	79-01-6	ug/L	--	0.2	U	0.2	U	<b>520</b>		<b>540</b>



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Analyte	SCDM Benchmark (lowest value)	3 x Background (MW-51S) or RL	CAS.NO	Units	Station Sample ID Date Type	MW-51S MW-51S-20190410 4/10/2019 Field Sample	MW-52S MW-52S-20190410 4/10/2019 Field Sample	MW-53S MW-53S-20190409 4/9/2019 Field Sample	MW-53S MW-DUP1-20190409 4/9/2019 Field Duplicate	MW-54S MW-54S-20190409 4/9/2019 Field Sample	MW-55S MW-55S-20190410 4/10/2019 Field Sample		
<b>Metals</b>													
Aluminum	-	0.063	7429-90-5	mg/L	--	<b>0.021</b>	<b>0.0772</b>	<b>0.0109</b>	0.01	UB	<b>0.078</b>	JK	<b>0.0887</b>
Antimony	0.006	0.01	7440-36-0	mg/L	--	0.0004	U	0.0004	U	0.0004	U	0.0004	U
Arsenic	0.00005	0.002	7440-38-2	mg/L	--	0.0004	U	<b>0.000528</b>	JQ	<b>0.00263</b>	<b>0.00285</b>	<b>0.000428</b>	JQ
Barium	2	0.1689	7440-39-3	mg/L	--	<b>0.0563</b>	<b>0.125</b>	<b>0.023</b>	<b>0.0256</b>	<b>0.134</b>	<b>0.0845</b>		
Beryllium	0.004	0.002	7440-41-7	mg/L	--	0.0002	U	0.0002	U	0.0002	U	0.0002	JQ
Cadmium	0.005	0.002	7440-43-9	mg/L	--	0.0002	U	0.0002	U	0.0002	U	0.0002	U
Calcium	-	91.8	7440-70-2	mg/L	--	<b>30.6</b>	<b>23.1</b>	<b>38.5</b>	<b>42.5</b>	<b>17.1</b>	<b>3.87</b>		
Chromium	0.00005	0.004	7440-47-3	mg/L	--	<b>0.00128</b>	JQ	<b>0.000696</b>	JQ	<b>0.00469</b>	<b>0.00376</b>	JQ	<b>0.00509</b>
Cobalt	0.006	0.005	7440-48-4	mg/L	--	<b>0.000437</b>	JQ	0.0002	U	0.0002	U	<b>0.000901</b>	JQ
Copper	0.8	0.002	7440-50-8	mg/L	--	0.001	U	0.001	U	0.001	U	0.001	U
Iron	10	0.2	7439-89-6	mg/L	--	<b>0.184</b>	JQ	<b>0.0724</b>	JQ	<b>0.0252</b>	JQ	<b>0.0227</b>	JQ
Lead	150	0.002	7439-92-1	mg/L	--	0.0006	U	0.0006	U	0.0006	U	0.0006	U
Magnesium	-	32.1	7439-95-4	mg/L	--	<b>10.7</b>	<b>9.09</b>	<b>15.9</b>	<b>16.1</b>	<b>6.48</b>	<b>2.02</b>		
Manganese	2.8	0.005	7439-96-5	mg/L	--	<b>0.0023</b>	JQ	<b>0.00491</b>	JQ	<b>0.00178</b>	JQ	<b>0.00186</b>	JQ
Nickel	0.4	0.00987	7440-02-0	mg/L	--	<b>0.00329</b>		0.0006	U	<b>0.00493</b>		<b>0.00404</b>	
Potassium	-	2.532	2023695	mg/L	--	<b>0.844</b>		<b>0.177</b>	JQ	<b>0.461</b>		<b>0.471</b>	
Selenium	0.05	0.0162	7782-49-2	mg/L	--	<b>0.0054</b>		<b>0.00296</b>		<b>0.00992</b>		<b>0.00793</b>	
Silver	0.1	0.002	7440-22-4	mg/L	--	0.0002	U	0.0002	U	0.0002	U	0.0002	U
Sodium	-	256.2	7440-23-5	mg/L	--	<b>85.4</b>		<b>57.7</b>		<b>114</b>		<b>126</b>	
Thallium	0.0002	0.002	7440-28-0	mg/L	--	0.0002	U	0.0002	U	0.0002	U	0.0002	U
Zinc	6	0.01392	7440-66-6	mg/L	--	<b>0.00464</b>		0.002	U	<b>0.00832</b>		<b>0.00797</b>	
Mercury	0.002	0.0002	7439-97-6	mg/L	--	0.00003	U	0.00003	U	0.00003	U	0.00003	U
<b>RAD*</b>													
Ra-226	1.35	0.22	13982-63-3	pCi/L	--	0.18	U	0.09	U	0.06	U	0.06	U
Ra-228	0.0502	0.64	15262-20-1	pCi/L	--	<b>0.44</b>	U	0.4	U	0.09	U	0.25	U
Th-228	0.1	0.097	14274-82-9	pCi/L	--	0.037	U	0.017	U	0.006	U	0.042	U
Th-230	0.571	0.082	14269-63-7	pCi/L	--	-0.009	U	0.009	U	-0.005	U	-0.018	U
Th-232	0.517	0.1	7440-29-1	pCi/L	--	0.003	U	0.017	U	-0.006	U	0.006	U
U-234	0.739	0.96	13966-29-5	pCi/L	--	<b>0.32</b>	JH	0.013	U	0.16	U	0.102	UJ
U-235	0.727	0.076	15117-96-1	pCi/L	--	0.026	U	0.041	U	-0.014	U	0.083	UJ
U-238	0.6	0.72	7440-61-1	pCi/L	--	<b>0.24</b>	JH	0.079	U	0.027	U	0.06	UJ

Note:  
ug/L - microgram per liter, mg/L - milligram per liter,  
pCi/L - picocurie per liter

Highlighted yellow - Above 3x Background or RL

U - Analyzed but not detected

Highlighted orange - above lowest SCDM benchmark

J - Analyte detected below Quantitation Limit

H - Biased high

L - Biased low

Q - The reported concentration is less than the sample quantitation limit for the specific analyte in the sample.

B - Blank contamination with Quantitation Limit elevated

\* Rad results compared to 3x background or RL, not 2 standard deviations above the mean



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Analyte	SCDM Benchmark (lowest value)	3 x Background (MW-51S) or RL	CAS.NO	Units	Station Sample ID Date Type	MW-56S MW-56S-20190410 4/10/2019 Field Sample	MW-57S MW-57S-20190411 4/11/2019 Field Sample	MW-57S MW-DUP3-20190411 4/11/2019 Field Duplicate	MW-62S MW-62S-20190411 4/11/2019 Field Sample	MW-63S MW-63S-20190411 4/11/2019 Field Sample	MW-64S MW-64S-20190409 4/9/2019 Field Sample	
<b>SVOC</b>												
2,4-Dimethylphenol	400	0.2	105-67-9	ug/L	--	0.04	U 0.041	U 0.071	JQ 0.04	U 0.04	U 0.04	U 0.04
2-Methylnaphthalene	80	0.1	91-57-6	ug/L	--	0.019	U 0.019	U 0.02	U 0.019	U 0.019	U 0.019	U 0.019
2-Methylphenol	-	0.2	95-48-7	ug/L	--	0.045	U 0.08	JQ 0.095	JQ 0.14	JQ 0.045	U 0.045	U 0.045
3&4-Methylphenol	2000	0.2	3/4-CRESOL	ug/L	--	0.036	U 0.037	U 0.11	JQ 0.12	JQ 0.036	U 0.036	U 0.036
Acetophenone	-	0.2	98-86-2	ug/L	--	0.024	U 0.024	U 0.025	U 0.024	U 0.024	U 0.024	U 0.024
Anthracene	6000	0.1	120-12-7	ug/L	--	0.014	U 0.014	U 0.014	U 0.014	U 0.014	U 0.014	U 0.014
Benzaldehyde	-	0.2	100-52-7	ug/L	--	0.03	U 0.031	U 0.031	U 0.03	U 0.03	U 0.03	U 0.03
Bis(2-ethylhexyl)phthalate	5.5	0.2	117-81-7	ug/L	--	0.037	U 0.038	U 0.038	U 0.037	U 0.058	JQ 0.037	U 0.037
Di-n-butyl phthalate	2000	0.2	84-74-2	ug/L	--	0.02	U 0.02	U 0.021	U 0.02	U 0.02	U 0.02	U 0.02
Di-n-octyl phthalate	200	0.2	117-84-0	ug/L	--	0.02	U 0.02	U 0.021	U 0.02	U 0.02	U 0.02	U 0.24
Isophorone	-	0.2	78-59-1	ug/L	--	0.025	U 0.026	U 0.026	U 0.025	U 0.025	U 0.025	U 0.025
Naphthalene	400	0.1	91-20-3	ug/L	--	0.02	U 0.02	U 0.021	U 0.02	U 0.02	U 0.02	U 0.02
Phenol	6000	0.2	108-95-2	ug/L	--	0.035	U 0.036	U 0.27	U 0.28	U 0.035	U 0.035	U 0.035
<b>VOC</b>												
1,1,1-Trichloroethane	200	1	71-55-6	ug/L	--	0.2	U 0.2	U 0.2	U 0.2	U 0.2	U 0.2	U 0.2
1,1-Dichloroethane	13	1	75-34-3	ug/L	--	0.2	U 0.2	U 0.2	U 0.2	U 0.2	U 0.2	U 0.2
1,1-Dichloroethene	7	1	75-35-4	ug/L	--	0.2	U 0.2	U 0.2	U 0.2	U 0.2	U 0.2	U 0.2
2-Butanone	10,000	2	78-93-3	ug/L	--	0.5	U 0.5	U 0.5	U 0.5	U 0.5	U 0.5	U 0.5
2-Hexanone	-	2	591-78-6	ug/L	--	1	U 1	U 1	U 1	U 1	U 1	U 1
4-Methyl-2-pentanone (MIBK)	10,000	2	108-10-1	ug/L	--	0.7	U 0.7	U 0.7	U 0.7	U 0.7	U 0.7	U 0.7
Acetone	10,000	2	67-64-1	ug/L	--	2	U 2	U 2	U 2	U 2	U 2	U 2
Carbon disulfide	2,000	2	75-15-0	ug/L	--	0.6	U 0.6	U 0.6	U 0.6	U 0.6	U 0.6	U 0.6
Chloroform	2.5	1	67-66-3	ug/L	--	0.2	U 0.2	U 0.2	U 0.2	U 0.2	U 0.2	U 0.2
cis-1,2-Dichloroethene	40	1	156-59-2	ug/L	--	0.2	U 0.2	U 0.2	U 0.2	U 0.2	U 0.2	U 0.2
Tetrachloroethene	5	1	127-18-4	ug/L	--	0.3	U 0.3	U 0.3	U 0.3	U 0.3	U 0.3	U 0.3
Toluene	1,000	1	108-88-3	ug/L	--	0.2	U 0.2	U 0.2	U 0.2	U 0.2	U 0.2	U 0.2
Trichloroethene	5	1	79-01-6	ug/L	--	0.2	U 0.2	U 0.2	U 0.2	U 0.2	U 0.2	U 0.2



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<b>Metals</b>												
Aluminum	-	0.063	7429-90-5	mg/L	--	<b>0.0285</b>	<b>2.23</b>	<b>2.24</b>	0.0218	<b>2.36</b>	<b>5.39</b>	JK
Antimony	0.006	0.01	7440-36-0	mg/L	--	0.0004	U	0.0004	U	0.0004	U	0.0004
Arsenic	0.00005	0.002	7440-38-2	mg/L	--	<b>0.00157</b>	JQ	<b>0.153</b>	<b>0.159</b>	<b>0.035</b>	<b>0.00708</b>	<b>0.0182</b>
Barium	2	0.1689	7440-39-3	mg/L	--	<b>0.0283</b>	<b>0.0151</b>	<b>0.0151</b>	<b>0.0258</b>	<b>0.112</b>	<b>0.0424</b>	
Beryllium	0.004	0.002	7440-41-7	mg/L	--	0.0002	U	<b>0.00165</b>	JQ	<b>0.00167</b>	JQ	0.0002
Cadmium	0.005	0.002	7440-43-9	mg/L	--	0.0002	U	<b>0.00158</b>	JQ	<b>0.00161</b>	JQ	0.0004
Calcium	-	91.8	7440-70-2	mg/L	--	<b>108</b>	<b>190</b>	<b>194</b>	<b>70.7</b>	<b>29.4</b>	<b>91.2</b>	
Chromium	0.00005	0.004	7440-47-3	mg/L	--	<b>0.00195</b>	JQ	<b>0.00273</b>	JQ	<b>0.00288</b>	JQ	<b>0.00584</b>
Cobalt	0.006	0.005	7440-48-4	mg/L	--	<b>0.00702</b>	<b>0.0223</b>	<b>0.0229</b>	<b>0.000401</b>	JQ	0.0002	U
Copper	0.8	0.002	7440-50-8	mg/L	--	0.001	U	0.001	U	0.001	U	0.001
Iron	10	0.2	7439-89-6	mg/L	--	<b>0.0513</b>	JQ	<b>0.231</b>	<b>0.249</b>	<b>0.0369</b>	JQ	<b>0.016</b>
Lead	150	0.002	7439-92-1	mg/L	--	0.0006	U	0.0006	U	0.0006	U	0.0006
Magnesium	-	32.1	7439-95-4	mg/L	--	<b>63.1</b>	<b>51.4</b>	<b>52.6</b>	<b>9.03</b>	<b>9.61</b>	<b>28.8</b>	
Manganese	2.8	0.005	7439-96-5	mg/L	--	<b>2.63</b>	<b>5.72</b>	<b>5.78</b>	<b>1.75</b>	<b>0.0919</b>	<b>0.431</b>	
Nickel	0.4	0.00987	7440-02-0	mg/L	--	<b>0.0212</b>	<b>0.0425</b>	<b>0.0432</b>	<b>0.00444</b>	<b>0.00154</b>	JQ	<b>0.035</b>
Potassium	-	2.532	2023695	mg/L	--	<b>0.807</b>	<b>51.6</b>	<b>53.1</b>	<b>89.4</b>	<b>7.65</b>	<b>8.34</b>	
Selenium	0.05	0.0162	7782-49-2	mg/L	--	0.0011	U	0.002	UB	0.0011	U	0.0011
Silver	0.1	0.002	7440-22-4	mg/L	--	0.0002	U	0.0002	U	0.0002	U	0.0002
Sodium	-	256.2	7440-23-5	mg/L	--	<b>91</b>	<b>233</b>	<b>239</b>	<b>142</b>	<b>159</b>	<b>46.9</b>	
Thallium	0.0002	0.002	7440-28-0	mg/L	--	0.0002	U	0.0002	U	0.0002	U	<b>0.000207</b>
Zinc	6	0.01392	7440-66-6	mg/L	--	<b>0.0262</b>	<b>0.0116</b>	<b>0.00555</b>	0.002	U	0.002	U
Mercury	0.002	0.0002	7439-97-6	mg/L	--	0.00003	U	0.00003	U	0.00003	U	0.00003
<b>RAD*</b>												
Ra-226	1.35	0.22	13982-63-3	pCi/L	--	0	U	0.06	U	0.03	U	0.07
Ra-228	0.0502	0.64	15262-20-1	pCi/L	--	<b>0.38</b>	U	0.52	U	0.52	U	0.16
Th-228	0.1	0.097	14274-82-9	pCi/L	--	0.012	U	-0.009	U	0.006	U	0.003
Th-230	0.571	0.082	14269-63-7	pCi/L	--	0.013	U	-0.007	U	0.013	U	0.001
Th-232	0.517	0.1	7440-29-1	pCi/L	--	0.014	U	0.003	U	0	U	0.009
U-234	0.739	0.96	13966-29-5	pCi/L	--	<b>5.05</b>	<b>0.076</b>	U	0.07	U	<b>5.5</b>	<b>0.75</b>
U-235	0.727	0.076	15117-96-1	pCi/L	--	<b>0.3</b>	JH	0.003	U	0.013	U	<b>0.39</b>
U-238	0.6	0.72	7440-61-1	pCi/L	--	<b>4.23</b>		0.163	U	0.078	U	<b>5.12</b>

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ug/L - microgram per liter, mg/L - milligram per liter,  
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**Fansteel Metals/FMRI**  
**EPA Region 6**

Analyte	SCDM Benchmark (lowest value)	3 x Backgroud (MW-51S) or RL	CAS.NO	Units	Station Sample ID Date Type	MW-65S MW-65S-20190412 4/12/2019 Field Sample	MW-67S MW-67S-20190411 4/11/2019 Field Sample	MW-68S MW-68S-20190410 4/10/2019 Field Sample	MW-69S MW-69S-20190410 4/10/2019 Field Sample	MW-69S MW-DUP2-20190410 4/10/2019 Field Duplicate	MW-70S MW-70S-20190411 4/11/2019 Field Sample	
<b>SVOC</b>												
2,4-Dimethylphenol	400	0.2	105-67-9	ug/L	--	<b>0.18</b>	JQ	<b>0.21</b>		0.04	U	0.04
2-Methylnaphthalene	80	0.1	91-57-6	ug/L	--	0.02	U	0.019	U	0.019	U	0.019
2-Methylphenol	-	0.2	95-48-7	ug/L	--	<b>0.35</b>		<b>0.2</b>	JQ	0.045	U	0.045
3&4-Methylphenol	2000	0.2	3/4-CRESOL	ug/L	--	<b>0.46</b>		<b>0.72</b>		0.036	U	0.036
Acetophenone	-	0.2	98-86-2	ug/L	--	0.025	U	0.024	U	0.024	U	0.024
Anthracene	6000	0.1	120-12-7	ug/L	--	0.014	U	0.014	U	<b>0.054</b>	JQ	0.014
Benzaldehyde	-	0.2	100-52-7	ug/L	--	0.031	U	0.03	U	0.03	U	0.03
Bis(2-ethylhexyl)phthalate	5.5	0.2	117-81-7	ug/L	--	0.038	U	0.037	U	0.037	U	0.037
Di-n-butyl phthalate	2000	0.2	84-74-2	ug/L	--	0.021	U	0.02	U	0.02	U	0.02
Di-n-octyl phthalate	200	0.2	117-84-0	ug/L	--	0.021	U	0.02	U	0.02	U	0.02
Isophorone	-	0.2	78-59-1	ug/L	--	0.026	U	<b>0.061</b>	JQ	0.025	U	0.025
Naphthalene	400	0.1	91-20-3	ug/L	--	0.021	U	<b>0.022</b>	JQ	0.02	U	0.02
Phenol	6000	0.2	108-95-2	ug/L	--	0.036	U	0.035	U	0.035	U	<b>0.17</b>
<b>VOC</b>												
1,1,1-Trichloroethane	200	1	71-55-6	ug/L	--	0.2	U	0.2	U	0.2	U	0.2
1,1-Dichloroethane	13	1	75-34-3	ug/L	--	0.2	U	0.2	U	0.2	U	0.2
1,1-Dichloroethene	7	1	75-35-4	ug/L	--	0.2	U	0.2	U	0.2	U	0.2
2-Butanone	10,000	2	78-93-3	ug/L	--	0.5	U	0.5	U	0.5	U	0.5
2-Hexanone	-	2	591-78-6	ug/L	--	1	U	1	U	1	U	1
4-Methyl-2-pentanone (MIBK)	10,000	2	108-10-1	ug/L	--	0.7	U	0.7	U	0.7	U	0.7
Acetone	10,000	2	67-64-1	ug/L	--	2	U	2	U	2	U	2
Carbon disulfide	2,000	2	75-15-0	ug/L	--	0.6	U	0.6	U	0.6	U	0.6
Chloroform	2.5	1	67-66-3	ug/L	--	0.2	U	0.2	U	0.2	U	0.2
cis-1,2-Dichloroethene	40	1	156-59-2	ug/L	--	<b>1</b>	JQ	0.2	U	0.2	U	0.2
Tetrachloroethene	5	1	127-18-4	ug/L	--	0.3	U	0.3	U	0.3	U	0.3
Toluene	1,000	1	108-88-3	ug/L	--	0.2	U	0.2	U	0.2	U	0.2
Trichloroethene	5	1	79-01-6	ug/L	--	<b>1.7</b>		0.2	U	0.2	U	0.2



**Table 4-3**  
**Summary of ESI Groundwater Analytical Data**  
**Fansteel Metals/FMRI**  
**EPA Region 6**

Analyte	SCDM Benchmark (lowest value)	3 x Background (MW-51S) or RL	CAS.NO	Units	Station Sample ID Date Type	MW-65S MW-65S-20190412 4/12/2019 Field Sample	MW-67S MW-67S-20190411 4/11/2019 Field Sample	MW-68S MW-68S-20190410 4/10/2019 Field Sample	MW-69S MW-69S-20190410 4/10/2019 Field Sample	MW-69S MW-DUP2-20190410 4/10/2019 Field Duplicate	MW-70S MW-70S-20190411 4/11/2019 Field Sample	
<b>Metals</b>												
Aluminum	-	0.063	7429-90-5	mg/L	--	32.3	40.6	0.123	0.555	0.598	0.262	
Antimony	0.006	0.01	7440-36-0	mg/L	--	0.000615	UB	0.00772	0.0004	U	0.0004	U
Arsenic	0.00005	0.002	7440-38-2	mg/L	--	0.0767	0.165	0.00207	0.00115	JQ	0.00115	JQ
Barium	2	0.1689	7440-39-3	mg/L	--	0.0804	0.0151	0.0397	0.062	0.0627	0.169	
Beryllium	0.004	0.002	7440-41-7	mg/L	--	0.00957	0.00825	0.0002	U	0.000277	JQ	0.000313
Cadmium	0.005	0.002	7440-43-9	mg/L	--	0.00231	0.000248	JQ	0.0002	U	0.0002	U
Calcium	-	91.8	7440-70-2	mg/L	--	51.2	0.441	JQ	7.1	10.6	10.3	53.2
Chromium	0.00005	0.004	7440-47-3	mg/L	--	0.00476	0.0313	0.000815	JQ	0.0004	U	0.0004
Cobalt	0.006	0.005	7440-48-4	mg/L	--	0.0271	0.0118	0.0002	U	0.0002	U	0.000215
Copper	0.8	0.002	7440-50-8	mg/L	--	0.001	U	0.0678	0.001	U	0.001	U
Iron	10	0.2	7439-89-6	mg/L	--	0.0541	JQ	0.505	0.112	JQ	0.0622	JQ
Lead	150	0.002	7439-92-1	mg/L	--	0.0006	U	0.000778	JQ	0.0006	U	0.0006
Magnesium	-	32.1	7439-95-4	mg/L	--	24.1	0.172	JQ	3.5	6.29	6.19	21.2
Manganese	2.8	0.005	7439-96-5	mg/L	--	5.93	0.244	0.0164	0.000989	JQ	0.00113	JQ
Nickel	0.4	0.00987	7440-02-0	mg/L	--	0.117	0.0348	0.000993	JQ	0.000813	JQ	0.000947
Potassium	-	2.532	2023695	mg/L	--	36.4	4.48	0.139	JQ	0.371	0.373	161
Selenium	0.05	0.0162	7782-49-2	mg/L	--	0.0011	U	0.00266	0.00165	JQ	0.0011	U
Silver	0.1	0.002	7440-22-4	mg/L	--	0.0002	U	0.000552	JQ	0.0002	U	0.0002
Sodium	-	256.2	7440-23-5	mg/L	--	37.4	96.6	74.6	3.43	3.43	28.4	
Thallium	0.0002	0.002	7440-28-0	mg/L	--	0.000559	JQ	0.000302	JQ	0.0002	U	0.0002
Zinc	6	0.01392	7440-66-6	mg/L	--	0.0254	0.00247	JQ	0.002	U	0.002	U
Mercury	0.002	0.0002	7439-97-6	mg/L	--	0.00003	U	0.000126	JQ	0.00003	U	0.00003
<b>RAD*</b>												
Ra-226	1.35	0.22	13982-63-3	pCi/L	--	0.36	U	0.16	U	-0.06	U	0.13
Ra-228	0.0502	0.64	15262-20-1	pCi/L	--	0.41	Y1,U	0.76	U	0.16	U	0.24
Th-228	0.1	0.097	14274-82-9	pCi/L	--	-0.003	U	0.4	0.083	U	0.036	U
Th-230	0.571	0.082	14269-63-7	pCi/L	--	0.028	U	0.37	-0.053	U	0.014	U
Th-232	0.517	0.1	7440-29-1	pCi/L	--	0.017	U	0.228	0.009	U	0.008	U
U-234	0.739	0.96	13966-29-5	pCi/L	--	16.2	101	0.22	U	1.48	1.42	2.14
U-235	0.727	0.076	15117-96-1	pCi/L	--	0.93	5.5	0.088	U	0.084	U	0.064
U-238	0.6	0.72	7440-61-1	pCi/L	--	17.2	104	0.07	U	1.11	1.08	1.72

Note:  
ug/L - microgram per liter, mg/L - milligram per liter,  
pCi/L - picocurie per liter

Highlighted yellow - Above 3x Background or RL

U - Analyzed but not detected

Highlighted orange - above lowest SCDM benchmark

J - Analyte detected below Quantitation Limit

H - Biased high

L - Biased low

Q - The reported concentration is less than the sample quantitation limit for the specific analyte in the sample.

B - Blank contamination with Quantitation Limit elevated

\* Rad results compared to 3x background or RL, not 2 standard deviations above the mean



**Table 4-3**  
**Summary of ESI Groundwater Analytical Data**  
**Fansteel Metals/FMRI**  
**EPA Region 6**

Analyte	SCDM Benchmark (lowest value)	3 x Background (MW-51S) or RL	CAS.NO	Units	Station Sample ID Date Type	MW-71S MW-71S-20190411 4/11/2019 Field Sample	MW-72S MW-72S-20190410 4/10/2019 Field Sample	MW-75S MW-75S-20190410 4/10/2019 Field Sample	MW-OW3 MW-OW3-20190411 4/11/2019 Field Sample	MW-OW4 MW-OW4-20190412 4/12/2019 Field Sample	MW-OW5 MW-OW5-20190412 4/12/2019 Field Sample						
<b>SVOC</b>																	
2,4-Dimethylphenol	400	0.2	105-67-9	ug/L	--	<b>0.35</b>		0.041	U	0.04	U	0.041	U	<b>0.32</b>			
2-Methylnaphthalene	80	0.1	91-57-6	ug/L	--	0.019	U	0.019	U	0.019	U	<b>0.037</b>	JQ	0.02	U		
2-Methylphenol	-	0.2	95-48-7	ug/L	--	<b>2.7</b>		0.046	U	0.045	U	<b>0.074</b>	JQ	<b>0.51</b>			
3&4-Methylphenol	2000	0.2	3/4-CRESOL	ug/L	--	<b>3.5</b>		0.037	U	0.036	U	<b>0.28</b>		<b>4.6</b>			
Acetophenone	-	0.2	98-86-2	ug/L	--	0.024	U	0.024	U	0.024	U	<b>0.15</b>	JQ	0.025	U		
Anthracene	6000	0.1	120-12-7	ug/L	--	0.014	U	0.014	U	0.014	U	0.014	U	0.015	U		
Benzaldehyde	-	0.2	100-52-7	ug/L	--	0.031	U	0.031	U	0.03	U	<b>0.28</b>	n	0.031	U		
Bis(2-ethylhexyl)phthalate	5.5	0.2	117-81-7	ug/L	--	<b>0.055</b>	JQ	0.038	U	0.037	U	<b>0.051</b>	JQ	0.038	U	0.039	U
Di-n-butyl phthalate	2000	0.2	84-74-2	ug/L	--	0.02	U	0.02	U	0.02	U	<b>0.028</b>	JQ	0.021	U		
Di-n-octyl phthalate	200	0.2	117-84-0	ug/L	--	0.02	U	0.02	U	0.02	U	0.02	U	0.021	U		
Isophorone	-	0.2	78-59-1	ug/L	--	0.026	U	0.026	U	0.025	U	0.025	U	0.026	U	0.026	U
Naphthalene	400	0.1	91-20-3	ug/L	--	0.02	U	0.02	U	0.02	U	<b>0.041</b>	JQ	<b>0.057</b>	JQ		
Phenol	6000	0.2	108-95-2	ug/L	--	<b>4.5</b>		0.036	U	0.035	U	<b>0.09</b>	JQ	0.036	U		
<b>VOC</b>																	
1,1,1-Trichloroethane	200	1	71-55-6	ug/L	--	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U		
1,1-Dichloroethane	13	1	75-34-3	ug/L	--	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U		
1,1-Dichloroethene	7	1	75-35-4	ug/L	--	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U		
2-Butanone	10,000	2	78-93-3	ug/L	--	0.5	U	0.5	U	0.5	U	0.5	U	<b>4.7</b>		0.5	U
2-Hexanone	-	2	591-78-6	ug/L	--	1	U	1	U	1	U	1	U	<b>5.1</b>		1	U
4-Methyl-2-pentanone (MIBK)	10,000	2	108-10-1	ug/L	--	0.7	U	0.7	U	0.7	U	0.7	U	<b>10000</b>		0.7	U
Acetone	10,000	2	67-64-1	ug/L	--	2	U	2	U	2	U	2	U	<b>470</b>		2	U
Carbon disulfide	2,000	2	75-15-0	ug/L	--	0.6	U	0.6	U	0.6	U	0.6	U	<b>47</b>		0.6	U
Chloroform	2.5	1	67-66-3	ug/L	--	0.2	U	0.2	U	<b>3.2</b>		0.2	U	0.2	U	0.2	U
cis-1,2-Dichloroethene	40	1	156-59-2	ug/L	--	0.2	U	0.2	U	0.2	U	<b>1.9</b>		0.2	U	0.2	U
Tetrachloroethene	5	1	127-18-4	ug/L	--	0.3	U	0.3	U	0.3	U	<b>1.8</b>		0.3	U	0.3	U
Toluene	1,000	1	108-88-3	ug/L	--	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Trichloroethene	5	1	79-01-6	ug/L	--	0.2	U	0.2	U	0.2	U	<b>64</b>		0.2	U	0.2	U



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**Summary of ESI Groundwater Analytical Data**  
**Fansteel Metals/FMRI**  
**EPA Region 6**

Analyte	SCDM Benchmark (lowest value)	3 x Background (MW-51S) or RL	CAS.NO	Units	Station Sample ID Date Type	MW-71S MW-71S-20190411 4/11/2019 Field Sample	MW-72S MW-72S-20190410 4/10/2019 Field Sample	MW-75S MW-75S-20190410 4/10/2019 Field Sample	MW-OW3 MW-OW3-20190411 4/11/2019 Field Sample	MW-OW4 MW-OW4-20190412 4/12/2019 Field Sample	MW-OW5 MW-OW5-20190412 4/12/2019 Field Sample	
<b>Metals</b>												
Aluminum	-	0.063	7429-90-5	mg/L	--	3.25		0.0866		0.331		0.0337
Antimony	0.006	0.01	7440-36-0	mg/L	--	0.0004	U	0.0004	U	0.0004	U	0.00422
Arsenic	0.00005	0.002	7440-38-2	mg/L	--	0.00472		0.131		0.00165	JQ	0.00402
Barium	2	0.1689	7440-39-3	mg/L	--	0.037		0.504		0.128		0.0254
Beryllium	0.004	0.002	7440-41-7	mg/L	--	0.0053		0.000537	JQ	0.0002	U	0.0002
Cadmium	0.005	0.002	7440-43-9	mg/L	--	0.0002	U	0.0002	U	0.0002	U	0.0129
Calcium	-	91.8	7440-70-2	mg/L	--	127		221		35.8		85
Chromium	0.00005	0.004	7440-47-3	mg/L	--	0.0106		0.0004	U	0.0004	U	0.00272
Cobalt	0.006	0.005	7440-48-4	mg/L	--	0.000621	JQ	0.00145	JQ	0.00171	JQ	0.000326
Copper	0.8	0.002	7440-50-8	mg/L	--	0.00153	JQ	0.001	U	0.001	U	0.001
Iron	10	0.2	7439-89-6	mg/L	--	0.286		34.5		0.823		0.0347
Lead	150	0.002	7439-92-1	mg/L	--	0.0006	U	0.0006	U	0.0006	U	0.0006
Magnesium	-	32.1	7439-95-4	mg/L	--	31.9		73.4		6.93		39.8
Manganese	2.8	0.005	7439-96-5	mg/L	--	0.272		10.4		0.123		0.379
Nickel	0.4	0.00987	7440-02-0	mg/L	--	0.00257		0.00146	JQ	0.00114	JQ	0.00596
Potassium	-	2.532	2023695	mg/L	--	120		5.79		2.84		0.481
Selenium	0.05	0.0162	7782-49-2	mg/L	--	0.0011	U	0.0011	U	0.0011	U	0.0161
Silver	0.1	0.002	7440-22-4	mg/L	--	0.0002	U	0.0002	U	0.0002	U	0.0231
Sodium	-	256.2	7440-23-5	mg/L	--	33.7		51		6.98		268
Thallium	0.0002	0.002	7440-28-0	mg/L	--	0.0002	U	0.0002	U	0.0002	U	0.0002
Zinc	6	0.01392	7440-66-6	mg/L	--	0.00883		0.00215	JQ	0.002	U	0.826
Mercury	0.002	0.0002	7439-97-6	mg/L	--	0.00003	U	0.00003	U	0.00003	U	0.00003
<b>RAD*</b>												
Ra-226	1.35	0.22	13982-63-3	pCi/L	--	0.03	U	0.31	U	0.16	U	0.2
Ra-228	0.0502	0.64	15262-20-1	pCi/L	--	0.48	U	0.88	U	0.46	U	-0.15
Th-228	0.1	0.097	14274-82-9	pCi/L	--	0.046	U	0.003	U	-0.018	U	0.012
Th-230	0.571	0.082	14269-63-7	pCi/L	--	0.033	U	0.003	U	0.004	U	0.057
Th-232	0.517	0.1	7440-29-1	pCi/L	--	0.012	U	0	U	0.008	U	0.009
U-234	0.739	0.96	13966-29-5	pCi/L	--	24.3		0.24	U	0.17	U	2.66
U-235	0.727	0.076	15117-96-1	pCi/L	--	1.59		0.062	U	0.024	U	0.062
U-238	0.6	0.72	7440-61-1	pCi/L	--	25		0.176	U	0.084	U	1.7

Note:  
ug/L - microgram per liter, mg/L - milligram per liter,  
pCi/L - picocurie per liter

Highlighted yellow - Above 3x Background or RL

U - Analyzed but not detected

Highlighted orange - above lowest SCDM benchmark

J - Analyte detected below Quantitation Limit

H - Biased high

L - Biased low

Q - The reported concentration is less than the sample quantitation limit for the specific analyte in the sample.

B - Blank contamination with Quantitation Limit elevated

\* Rad results compared to 3x background or RL, not 2 standard deviations above the mean



**Table 4-3**  
**Summary of ESI Groundwater Analytical Data**  
**Fansteel Metals/FMRI**  
**EPA Region 6**

Analyte	SCDM Benchmark (lowest value)	3 x Backgroud (MW-51S) or RL	CAS.NO	Units	Station Sample ID Date Type	MW-OW6 MW-OW6-20190411 4/11/2019 Field Sample	MW-OW8 MW-OW8-20190410 4/10/2019 Field Sample	MW-OW9 MW-OW9-20190411 4/11/2019 Field Sample
<b>SVOC</b>								
2,4-Dimethylphenol	400	0.2	105-67-9	ug/L	--	0.041	U <b>0.043</b>	JQ   0.041
2-Methylnaphthalene	80	0.1	91-57-6	ug/L	--	0.019	U   0.019	U   0.019
2-Methylphenol	-	0.2	95-48-7	ug/L	--	0.046	U <b>2.7</b>	U   0.046
3&4-Methylphenol	2000	0.2	3/4-CRESOL	ug/L	--	0.037	U <b>0.2</b>	JQ   0.037
Acetophenone	-	0.2	98-86-2	ug/L	--	0.024	U   0.024	U   0.024
Anthracene	6000	0.1	120-12-7	ug/L	--	0.014	U   0.014	U   0.014
Benzaldehyde	-	0.2	100-52-7	ug/L	--	0.031	U   0.03	U   0.031
Bis(2-ethylhexyl)phthalate	5.5	0.2	117-81-7	ug/L	--	<b>0.039</b>	JQ   0.037	U   0.038
Di-n-butyl phthalate	2000	0.2	84-74-2	ug/L	--	0.02	U   0.02	U   0.02
Di-n-octyl phthalate	200	0.2	117-84-0	ug/L	--	0.02	U   0.02	U   0.02
Isophorone	-	0.2	78-59-1	ug/L	--	0.026	U   0.025	U   0.026
Naphthalene	400	0.1	91-20-3	ug/L	--	0.02	U   0.02	U   0.02
Phenol	6000	0.2	108-95-2	ug/L	--	0.036	U <b>0.39</b>	U   0.036
<b>VOC</b>								
1,1,1-Trichloroethane	200	1	71-55-6	ug/L	--	0.2	U   0.2	U   0.2
1,1-Dichloroethane	13	1	75-34-3	ug/L	--	0.2	U   0.2	U   0.2
1,1-Dichloroethene	7	1	75-35-4	ug/L	--	0.2	U   0.2	U <b>0.69</b>
2-Butanone	10,000	2	78-93-3	ug/L	--	0.5	U   0.5	U   0.5
2-Hexanone	-	2	591-78-6	ug/L	--	1	U   1	U   1
4-Methyl-2-pentanone (MIBK)	10,000	2	108-10-1	ug/L	--	0.7	U   0.7	U   0.7
Acetone	10,000	2	67-64-1	ug/L	--	2	U   2	U   2
Carbon disulfide	2,000	2	75-15-0	ug/L	--	0.6	U   0.6	U   0.6
Chloroform	2.5	1	67-66-3	ug/L	--	0.2	U   0.2	U   0.2
cis-1,2-Dichloroethene	40	1	156-59-2	ug/L	--	<b>0.81</b>	JQ   0.2	U <b>0.58</b>
Tetrachloroethene	5	1	127-18-4	ug/L	--	0.3	U   0.3	U <b>0.47</b>
Toluene	1,000	1	108-88-3	ug/L	--	0.2	U   0.2	U   0.2
Trichloroethene	5	1	79-01-6	ug/L	--	<b>0.88</b>	JQ   0.2	U <b>28</b>



**Table 4-3**  
**Summary of ESI Groundwater Analytical Data**  
**Fansteel Metals/FMRI**  
**EPA Region 6**

Analyte	SCDM Benchmark (lowest value)	3 x Background (MW-51S) or RL	CAS.NO	Units	Station Sample ID Date Type	MW-OW6 MW-OW6-20190411 4/11/2019 Field Sample	MW-OW8 MW-OW8-20190410 4/10/2019 Field Sample	MW-OW9 MW-OW9-20190411 4/11/2019 Field Sample
<b>Metals</b>								
Aluminum	-	0.063	7429-90-5	mg/L	--	<b>1.77</b>	<b>0.0275</b>	<b>0.0282</b>
Antimony	0.006	0.01	7440-36-0	mg/L	--	0.0004	U 0.0004	U 0.0004
Arsenic	0.00005	0.002	7440-38-2	mg/L	--	<b>0.0476</b>	<b>0.0259</b>	<b>0.029</b>
Barium	2	0.1689	7440-39-3	mg/L	--	<b>0.0556</b>	<b>0.236</b>	<b>0.0355</b>
Beryllium	0.004	0.002	7440-41-7	mg/L	--	<b>0.00631</b>	<b>0.000338</b>	JQ 0.0002
Cadmium	0.005	0.002	7440-43-9	mg/L	--	<b>0.000918</b>	JQ 0.0002	U 0.0002
Calcium	-	91.8	7440-70-2	mg/L	--	<b>17.9</b>	<b>124</b>	<b>129</b>
Chromium	0.00005	0.004	7440-47-3	mg/L	--	0.0004	U 0.0004	U 0.0004
Cobalt	0.006	0.005	7440-48-4	mg/L	--	<b>0.0104</b>	<b>0.000847</b>	JQ <b>0.00156</b>
Copper	0.8	0.002	7440-50-8	mg/L	--	0.001	U 0.001	U 0.001
Iron	10	0.2	7439-89-6	mg/L	--	<b>0.134</b>	JQ <b>16.3</b>	<b>2.1</b>
Lead	150	0.002	7439-92-1	mg/L	--	0.0006	U 0.0006	U 0.0006
Magnesium	-	32.1	7439-95-4	mg/L	--	<b>12.5</b>	<b>104</b>	<b>53.2</b>
Manganese	2.8	0.005	7439-96-5	mg/L	--	<b>6.54</b>	<b>5.2</b>	<b>1.05</b>
Nickel	0.4	0.00987	7440-02-0	mg/L	--	<b>0.0315</b>	<b>0.00208</b>	<b>0.0164</b>
Potassium	-	2.532	2023695	mg/L	--	<b>42.6</b>	<b>3.26</b>	<b>2.82</b>
Selenium	0.05	0.0162	7782-49-2	mg/L	--	0.0011	U 0.0011	U 0.0011
Silver	0.1	0.002	7440-22-4	mg/L	--	0.0002	U 0.0002	U 0.0002
Sodium	-	256.2	7440-23-5	mg/L	--	<b>101</b>	<b>46.5</b>	<b>180</b>
Thallium	0.0002	0.002	7440-28-0	mg/L	--	<b>0.000768</b>	JQ 0.0002	U 0.0002
Zinc	6	0.01392	7440-66-6	mg/L	--	<b>0.00496</b>	<b>0.00263</b>	JQ <b>0.00439</b>
Mercury	0.002	0.0002	7439-97-6	mg/L	--	0.00003	U 0.00003	U 0.00003
<b>RAD*</b>								
Ra-226	1.35	0.22	13982-63-3	pCi/L	--	0.17	U 0.58	U -0.1
Ra-228	0.0502	0.64	15262-20-1	pCi/L	--	<b>0.17</b>	<b>2.39</b>	<b>0.63</b>
Th-228	0.1	0.097	14274-82-9	pCi/L	--	-0.013	U 0.051	U 0.06
Th-230	0.571	0.082	14269-63-7	pCi/L	--	0.031	U 0.032	U 0.038
Th-232	0.517	0.1	7440-29-1	pCi/L	--	0.011	U 0.004	U 0.008
U-234	0.739	0.96	13966-29-5	pCi/L	--	<b>9</b>	JL <b>1.76</b>	<b>0.38</b>
U-235	0.727	0.076	15117-96-1	pCi/L	--	<b>0.53</b>	J 0.018	U 0.058
U-238	0.6	0.72	7440-61-1	pCi/L	--	<b>9</b>	JL <b>1.16</b>	0.23

Note:

ug/L - microgram per liter, mg/L - milligram per liter,  
pCi/L - picocurie per liter

Highlighted yellow - Above 3x Background or RL

U - Analyzed but not detected

Highlighted orange - above lowest SCDM benchmark

J - Analyte detected below Quantitation Limit

H - Biased high

L - Biased low

Q - The reported concentration is less than the sample quantitation limit for the specific analyte in the sample.

B - Blank contamination with Quantitation Limit elevated

\* Rad results compared to 3x background or RL, not 2 standard deviations above the mean

